

## CLAIMS

1. A polygon-type semiconductor detector for use in a high-speed X-ray CT, said detector comprising:

a plurality of detector modules each of which is formed by arranging a plurality of X-ray detection pixels unidirectionally on a single planar semiconductor substrate,

wherein said polygon-type semiconductor detector for use in a high-speed X-ray CT is formed by polygonally arranging the plurality of said detector modules around a measuring area.

2. A polygon-type semiconductor detector for use in a high-speed X-ray CT according to claim 1, wherein a CdTe semiconductor is used as said semiconductor substrate.

3. A polygon-type semiconductor detector for use in a high-speed X-ray CT according to claim 1, wherein said single semiconductor substrate is provided on a printed circuit board, and wherein the plurality of X-ray detection pixels formed on the semiconductor substrate is arranged along the longitudinal direction of said semiconductor substrate.

4. A polygon-type semiconductor detector for use in a high-speed X-ray CT according to claim 3, wherein the plurality of X-ray detection pixels on said single semiconductor substrate is arranged in a line.

5. A polygon-type semiconductor detector for use in a high-speed X-ray CT according to any one of claims 1 to 4, wherein electrodes of the X-ray detection pixels provided on the single semiconductor substrate are formed by means of photolithography.

6. A method for manufacturing a polygon-type semiconductor detector for use in a high-speed X-ray CT, said method comprising the steps of:

manufacturing a plurality of detector modules having a plurality of X-ray detection pixels

on a single planar semiconductor substrate of each of the detector modules whose electrodes are made by photolithography; and

forming said X-ray semiconductor detector by polygonally arranging the plurality of said detector modules around the measuring area.